Having, thus, described the invention, what is claimed is:

1. An insert apparatus for use with a bowling ball, said apparatus comprising a socket member and an insert member which fits removably into the socket member,

said socket member comprising

a cylindrical sleeve having a first hollow bore formed therein with a first diameter and

a base formed integrally with the sleeve, the base comprising a first locking structure;

said insert member configured to fit nestingly inside said socket member and comprising

a substantially cylindrical main body having an upper end and a lower end, and

a second locking structure attached to the lower end of said main body and configured to cooperatively interact with said first locking structure;

wherein said insert member is nestingly insertable into said first hollow bore of said socket member and is twistable in said socket member, when fully inserted therein, to engage said first and second locking structures to temporarily and removably lock the insert member in the socket member.

2. The insert apparatus of claim 1, wherein one of the first and second locking structures comprises a plurality of fingers extending outwardly on the lower end of the insert member or socket member , and wherein the other of the first and second locking structures comprises:

a plurality of cutouts formed in the base of the socket member or the insert member to receive said fingers, and a plurality of tracks formed in the base of the socket member or the insert member adjacent said cutouts, respectively, each of said tracks having a notch formed at an end thereof to engagingly receive one of said fingers.

3. The insert apparatus of claim 2, wherein said tracks comprise ramps.

4. The insert apparatus of claim 2, wherein said tracks of said socket member have notches formed therein at ends thereof opposite said cutouts, to temporarily retain the fingers therein.

5. The insert apparatus of claim 4, wherein the portions of the fingers which contact the tracks comprise curved surfaces, and wherein the notches are correspondingly curved to receive said curved surfaces.

6. The insert apparatus of claim 1, wherein the main body of the insert member is formed from a substantially rigid material, and wherein the insert member further comprises a liner inside of the main body.

7. The insert apparatus of claim 6, wherein the insert member is made from a dual durometer material, with the main body and hub made from a strong, rigid plastic material and the liner is formed from a second, more resilient material.

8. The insert apparatus of claim 7, wherein the liner comprises an elastomeric material.

9. An insert apparatus for use with a bowling ball, said apparatus comprising a socket member and an insert member which fits removably into the socket member,

said socket member comprising

a cylindrical sleeve having a first hollow bore formed therein with a first diameter and

a base formed integrally with the sleeve, the base comprising a floor panel extending inwardly at the bottom of the sleeve and defining a ledge, said floor panel having a second hollow bore formed centrally therein which is coaxial with the sleeve and which has a second diameter smaller than the first diameter, said floor panel having a plurality of cutouts formed therein in communication with said second bore,

said base having a channel formed therein below said floor panel corresponding to each of said cutouts, respectively, and extending away from each said cutout, each of said channels defining a track formed in said base below said ledge,

said insert member configured to fit nestingly inside said socket member and comprising

a substantially cylindrical main body having an upper end and a lower end, and

a reduced-diameter hub attached to and extending downwardly from the lower end of the main body,

said insert member further comprising a plurality of spaced apart fingers operatively attached to said hub and extending outwardly thereon;

wherein said insert member is nestingly insertable into said first hollow bore of said socket member with the fingers aligned with the respective cutouts in the base of said socket member, and said insert member is twistable in said socket member, when fully inserted therein, to slide said fingers along said tracks.

10. The insert apparatus of claim 9, wherein said tracks comprise ramps.

11. The insert apparatus of claim 9, wherein said tracks of said socket member have notches formed therein at ends thereof opposite said cutouts, to temporarily retain the fingers therein.

12. The insert apparatus of claim 11, wherein the portions of the fingers which contact the tracks comprise curved surfaces, and wherein said notches are configured to receive said curved surfaces therein.

13. An insert apparatus for use with a bowling ball, said apparatus comprising a socket member and an insert member which fits removably into the socket member,

said socket member comprising a cylindrical sleeve having a first hollow bore formed therein with a first diameter and a base formed integrally with the sleeve, the base comprising a floor panel extending inwardly at the bottom of the sleeve and defining a ledge, said floor panel having a second hollow bore formed centrally therein which is coaxial with the sleeve and which has a second diameter smaller than the first diameter, said floor panel having a plurality of cutouts formed therein in communication with said second bore,

said base having a channel formed therein below said floor panel corresponding to each of said cutouts, respectively, and extending away from each said cutout, each of said channels defining a track formed in said base below said ledge, said tracks having notches formed therein at ends thereof opposite the cutouts, to temporarily retain the fingers therein;

said insert member configured to fit nestingly inside said socket member and comprising a substantially cylindrical main body having an upper end and a lower end, and a reduced-diameter hub attached to and extending downwardly from the lower end of the main body, said insert member further comprising a plurality of spaced apart fingers integrally attached to said hub and extending outwardly thereon;

wherein said insert member is nestingly insertable into said first hollow bore of said socket member with the fingers aligned with the respective cutouts in the base of

said socket member, and said insert member is twistable in said socket member, when fully inserted therein, to slide said fingers along said tracks.

14. The insert apparatus of claim 13, wherein the tracks of said socket member comprise ramps.

15. A method of using an insert apparatus, comprising the steps of:

a) gluing a socket member in a hole formed in a bowling ball, said socket member comprising a cylindrical sleeve having a first hollow bore formed therein with a first diameter, and a base formed integrally with the sleeve, the base comprising a first locking structure;

b) inserting an insert member into the hollow bore of said socket member, said insert member comprising a substantially cylindrical main body having an upper end and a lower end, and a second locking structure attached to the lower end of said main body and configured to cooperatively interact with said first locking structure;

c) aligning said first locking structure with said second locking structure; and

d) twisting said insert member in said socket member, to engage said first and second locking structures and to temporarily and removably lock the insert member in the socket member.

16. The method of claim 15, wherein said first locking structure comprises plurality of fingers extending outwardly from the lower end of the insert member, and

wherein the second locking structure comprises a plurality of cutouts formed in the base of the socket member to receive the fingers of the insert member, and a plurality of tracks formed in the base of the socket member adjacent said cutouts, respectively, each of said tracks having a notch formed at an end thereof to engagingly receive one of said fingers.